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ABSTRACT

Approximately 600 students (grades 6-9) in a rural school system were evaluated for student attitudes about grouping and its relation to self-concept, school satisfaction, sex, grade, and ability. The 7th and 8th graders were grouped by ability. The other 2 grades were included for purposes of comparison: 6th for anticipatory reactions and 9th for possible effects of grouping experiences. Attitudes toward grouping were obtained on a 25-item questionnaire. Self-concept was determined by a scale of bipolar adjectives in semantic differential format. The Student Opinion Poll was used to determine attitudes toward school. Grades and standardized achievement scores were obtained from student records. Data were analyzed using correlation and chi-square techniques. In general, positive attitudes toward ability grouping were expressed. Some attitudinal differences were found among students in different levels of grouping placement, with those in the highest and lowest groups being more favorable. Students perceived their grouping placement with considerable accuracy. No systematic attitudinal differences existed between sexes, but there were differences between classes. Students who had experienced homogeneous grouping were more favorable toward it than those who had not. No significant relationships existed between course grades and attitudes toward grouping, but significant relationships existed between achievement scores and attitudes toward grouping, with higher achievers being more favorable toward grouping. Little relationship existed between attitude items and self-concept or school satisfaction. (JH)

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Student Attitudes Toward Grouping And Their Effects On Self-Concept And School Satisfaction

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Many of the educational methods utilized by the public schools reflect the desire of society to maximize what each individual student can gain from his school experience. One approach to this which has created considerable controversy has been the grouping of students, usually by ability. "Grouping" refers to how a particular class of students is constituted. Grouping by ability and homogeneous grouping will be used synonymously to refer to a class of students with similar abilities.

Although research on ability grouping began with Whipples' study in 1916, definite conclusions about the effects of such practices are still ambiguous. In part, the confusing and often contradictory results may be attributable to the quality of the research. A typical example is provided by Billett's 1932 review of research conducted between 1918 and 1928. Of 140 research studies published during this period, 32 were eliminated because they were not experimental; of the remaining 108, all but six lacked control groups. From these studies, 88 favored grouping, 4 were anti-grouping and 10 produced doubtful results. Of the last six studies, Billett considered two to be partially controlled. One of these favored grouping; the other was doubtful. Only four of the 140 studies were considered thoroughly controlled, two favoring grouping, one doubtful and one unfavorable.

Passow (1962) enumerated some sources of difficulty in generalyzing from the research on ability grouping: variation in purpose, variation in number of pupil and groups and the sizes of the groups

included; differences in the use of experimental and control groups; differences in curricula and methods of teaching; variation among teachers; variation in the instruments and techniques used in the evaluation of changes in pupils and failure to assess the effect of grouping on teachers and administrators.

A summary of research conducted prior to 1960 suggests that the effectiveness of grouping per se has yet to be demonstrated. Investigation into the effects of homogeneous grouping of children according to intellectual level has led to contradictory results. The large number of variables investigated has made comparability of results difficult to achieve. The only common point in the many studies is that the effectiveness of ability grouping depends upon the appropriate variation of curriculum and instruction according to the needs of a particular group.

Research since 1960 has supported the above conclusions and has added the refinement that ability grouping has different and inconsistent effects for different levels of intellectual ability. For example, Borg found more over-achievers in the superior group of students where ability grouped classes were used. In contrast, Enzmann (1963) found no significant difference in achievement with superior students and a specifically designed curriculum. McCown (1963), however, found significant differences in favor of homogeneous grouping when compared with an equal group in heterogeneous classes.

Research efforts during the last decade have also broadened to include the effects of grouping practices on social and emotional factors. Mann (1960) found that the self-concept of fifth graders

was influenced according to membership in a particular ability group. Children in the low ability group defined themselves with only negative responses, whereas children in the high ability group made no negative responses. Children in the middle group were found to be least aware of their own ability. Cowles (1963) found that sixth graders in homogeneous groups made significantly better social adjustment than a comparable group in heterogeneous classes.

Evidence for social and emotional correlates of ability grouping has also tened to be contradictory and confusing. In contrast to results of Cowles and Mann cited above, Ficks (1963) found no differences in self-concept across ability-grouped classes. Wilcox (1964) found similar results in his study of ability grouping in eighth grade. In fact, Wilcox found self-concept to be lower in high ability groups than for low ability students. Again, grouping students without other curricular modifications seems to have little consistent effect. Recent studies have suggested that social and emotional factors are influenced in different ways within various groups of students.

Apart from the controversy generated by research efforts, grouping by ability has been the subject of emotional arguments by those for and against this practice. Parents may, for example, approve grouping when it reflects favorably on them. Teachers may favor grouping by ability as a means of limiting the range of intellect with which they must deal in a given class; administrators often oppose because of scheduling problems. But rarely have the children themselves been queried as to their attitudes about being grouped. The purpose of

this study was to evaluate students' attitudes about grouping and its relation to self-concept, school satisfaction, sex, grade and ability. To this end, the following questions were asked:

1. What are the attitudes of the students toward grouping practices? Do they prefer segregation by ability or would they prefer other techniques of forming classes?

2. Do attitudes toward grouping differ among students from different ability groups? Are these attitudes related to students' perceptions of their group placement? Are students aware of their grouping placement?

3. Are other variables such as sex and experience with grouping related to students' attitudes about grouping?

4. Are there relationships between grouping attitudes and students' scores on standardized achievement tests and grades in academic subjects?

5. Are attitudes toward grouping, grouping placement, and perceived grouping placement related to students' satisfaction with school and with self-concept?

METHOD

Subjects

Approximately six-hundred subjects from the sixth, seventh, eighth, and ninth grades of a rural school system were included in this study. Although only the seventh and eighth grade students were homogeneously grouped, the other two classes were included for purposes of comparison, sixth for anticipatory reactions and ninth for possible effects of grouping experiences.

Homogeneous grouping placement was determined for each student by school administrators. This was a somewhat subjective judgment, as rigid homogeneous grouping was not practiced in the system. Determination of grouping placement for ninth graders was based on experience while in seventh and eighth grade, as recalled by administrators.

Instruments

Attitudes Toward Grouping

Attitudes toward grouping were evaluated by means of a 25 item questionnaire constructed for this study. Content of the statements represented a broad range of attitudes toward grouping practices both pro and con. The statements are listed in Appendix I. Items relevant to the discussion of homogeneous grouping are numbers 3, 4, 7, 8, 9, 10, 11, 15, 19, 20, 21 and 23 and attention in this paper will focus on these items.

Self-Concept

The self-concept of each student was determined by a scale composed of bi-polar adjectives presented in a semantic-differential format. This instrument was factor analyzed and two major factors emerged. The first contained adjectives characteristic of good students, i.e., "follows directions, obedient, pleasant, polite, and likes school, a good student, studies a lot, and is happy". The second factor contained qualities of leadership or popularity, i.e., popular, respected, good reader, important leader, learns quickly and good student. Factor scores from these two factors were employed in the study. The Kuder-Richardson formula 20 reliability coefficient for the total scale is .6952.

School Satisfaction

The Student Opinion Poll, (SOP), developed by the Kent State Educational Psychology Department and revised for this study, was used to determine each student's attitudes toward school. Each item of the SOP is responded to with three descriptive word pairs indicating either satisfaction or directional dissatisfaction, i.e., "too much" or "too little" of a characteristic; the satisfaction response is scored. Factor analyses of the SOP produced no clear factor structure, so total satisfaction score was used in analyses. The Kuder-Richardson formula 20 reliability coefficient is .7194.

Other Measures

A single item from the SOP was used for classification. The item asked the student to indicate which of three ability groups (high, medium, or low) he is usually a member. Responses to this item represented the students' perception of grouping placement.

Grades and standardized achievement scores were obtained from the students' records. It was necessary to use Composite scores from the Iowa Tests of Educational Development for the sixth and seventh grade students and Sequential Tests of Educational Progress (STEP) scores for the eighth and ninth graders since common instruments were not available for all subjects.

RESULTS

1. What are the attitudes of the students toward grouping practices? Do they prefer segregation by ability or would they prefer other techniques of forming classes?

How do students feel about grouping? Table 1 below indicates the percentage of agreement with the grouping items across the total sample. Responses to item number 4 opposed grouping; the other eight items favor grouping practices. Numbers 11 and 15 ask the students directly if they favor grouping (11. I would like to be in a class where everybody learns at the same speed; 15. Students who want to go faster should be put in a special class rather than to just be given more work in their regular classes.) to which over 70% of the students reply that they do. A majority, 57.2%, would rather be grouped with children of similar ability than be in classes with their friends. Of the eleven items, only two (Numbers 9 and 10) do not show any clear preference. Thus, the four combined classes favor grouping.

Table 1

Response Percentage For Items Related To Homogeneous Grouping For The Total Sample

	Agree	Disagree
#3	71.2%	28.8%
#4	42.6%	57.4%
#7	86.0%	14.0%
#9	48.2%	51.9%
#10*	44.9%	55.1%
#11	78.1%	21.9%
#15	71.0%	29.0%
#19	61.6%	38.4%
#20*	42.8%	57.2%
#21*	55.3%	44.7%
#23*	40.3%	59.7%

N = 479

*Indicates that disagreement with this item represents a pro-grouping response.

2. Do attitudes toward grouping differ among students from different ability groups? Are these attitudes related to students' perceptions of their group placement? Are students aware of their grouping placement?

Chi Square comparisons were run between the five categories of grouping placement and each attitude item. Categories were assigned from 1 as the highest grouping to 5 as the lowest. Sixth graders were not included in this analysis since the sixth grade was not homogeneously grouped. Eight of the 25 analyses were statistically significant ($p < .05$). Each group's percentage of response for these significant items are given in Table 2.

In three of the items (numbers 10, 20 and 21) the highest ability group indicated a greater preference for grouping while the lowest group showed a greater preference for grouping in number 17. The other four items did not specifically indicate attitudes toward grouping.

These results indicate that there is some differentiation in attitudes toward grouping related to the students' ability group with those in the most select group more in favor of grouping. This conclusion must be tempered as only four of the eleven items showed significant differences between groups.

There is evidence that the children in this investigation were aware of their ability group placement. Each child was forced to respond to the question, "I am in an upper, middle or lower ability group." Replies were correlated with the school's designation of each seventh eighth and ninth grader's ability group. The correlation coefficient of .50 was significant at the .01 level of confidence, indicating a strong relationship between actual group and perceived group.

Table 2

Percentages of Students
In Each of the Five Grouping Placement Categories
For Those Attitude Items Showing Significant Differences

		I.	II.	III.	IV.	V.
2 (.01)	No	11.4	11.8	25.6	37.5	34.8
	Yes	88.6	88.2	74.4	62.5	65.2
10 (.05)	No	70.9	68.2	48.7	60.9	50.0
	Yes	29.1	31.8	51.3	39.1	50.0
13 (.01)	No	6.3	14.1	19.2	18.8	43.5
	Yes	93.7	85.9	80.8	82.2	56.5
14 (.01)	No	21.5	35.3	50.0	26.6	37.0
	Yes	78.5	64.7	50.0	73.4	63.0
16 (.01)	No	17.7	22.4	41.0	45.3	45.7
	Yes	82.3	77.6	59.0	54.7	54.3
17 (.01)	No	68.4	64.7	51.3	43.8	45.7
	Yes	31.6	35.3	48.7	56.2	54.3
20 (.05)	No	67.1	75.3	58.9	57.8	47.8
	Yes	32.9	24.7	41.1	42.2	52.2
21 (.05)	No	57.0	43.5	39.7	31.3	45.7
	Yes	43.0	56.5	60.3	68.8	54.3
N =		79	85	78	64	46

How are attitudes related to students' perception of their group placement? Chi Square analyses of the twenty-five attitude items vs. student designation of his perceived group yielded only five attitude items (numbers 8, 13, 16, 20 and 21) which differed significantly from chance , of which only items 20 and 21 referred directly to homogeneous grouping.

The students who see themselves as members of the lowest group supported grouping in item number 20, (i.e. I would prefer to be in a class with my friends rather than one where everyone can do about the same level of work); disagreed with grouping in item 21, (It isn't right to put the students who are having trouble in school all in one class.) The other nine items did not differentiate between attitudes and perceived group. Thus, there were no apparent trends between attitudes and perceived group placement.

Table 3

Percentages of Students in Each of Three Perceived Ability Group Placements for Those Attitude Items Showing Significant Differences

		Upper	Middle	Lower
8 (.05)	Disagree	44	55	37
	Agree	56	45	62
13 (.01)	Disagree	17	19	44
	Agree	82	81	56
16 (.01)	Disagree	29	43	51
	Agree	71	57	49
20 (.05)	Disagree	36	44	60
	Agree	64	56	39
21 (.05)	Disagree	51	61	41
	Agree	49	39	58
	N =	184	253	43

3. Are other variables such as sex and experience with grouping related to students' attitudes about grouping?

The first part of the third question asks how sex relates to grouping attitudes. Percentage tables (see Appendix, Table 4) based upon Chi Square analyses, significant at the .01 and .05 levels, indicate nine items in which responses were related to sex differences. Of these, only three items were grouping items (numbers 3, 9 and 20). Preference for grouping was not consistently related to sex. In two of the items girls were more in favor of grouping, while in the other two, boys were. This probably reflects responses to specific item content rather than consistent attitudes toward grouping related to sex.

As indicated by the percentage tables of items taken from statistically significant Chi Square analyses, (see Table 5), there were some distinct differences between classes in attitudes. Since over half of the twenty-five items are statistically significant and since percentages may be seen in the table, mention will only be made of grouping results.

Inspection of these significant items indicates the strongest pro grouping attitudes to be found among the eighth and ninth graders. The least favorable attitudes toward grouping practices were found among the sixth graders. As an example, for item number 15, (Students who want to go faster should be put in a special class rather than to just be given more work in their regular classes.) agreement with this statement increased from 57.5 in the sixth grade group to 79.4 in

the ninth graders. Item number 11 (I would like to be in a class where everybody learns at the same speed.) was most positively responded to by the seventh and eighth graders, the two classes then currently involved in homogeneous grouping.

In summary, there were no consistent relationships between sex and attitudes toward grouping. Results did indicate that students in higher grades who had experienced grouping were more favorable to it than students in lower grades who had little or no experience with grouping.

Table 4

Between Sex Percentages For Those
Attitude Items Showing Significant Differences

		Males	Females
#2	No	73	85
	Yes	26	14
#3	No	67	75
	Yes	32	24
#5	No	31	21
	Yes	68	78
#6	No	59	45
	Yes	40	54
#9	No	54	41
	Yes	45	58
#16	No	52	70
	Yes	47	29
#17	No	47	37
	Yes	52	62
#18	No	88	94
	Yes	11	5
#20	No	50	34
	Yes	49	65
	N =	251	228

Table 5

Between Class Percentages For Those
Attitude Items Showing Significant Differences

		Sixth	Seventh	Eighth	Ninth
#1	Agree	54.3	80.0	68.9	54.2
	Disagree	45.7	20.0	31.1	45.8
#3	Agree	67.7	65.6	80.7	72.0
	Disagree	32.3	34.4	19.3	28.0
#5	Agree	25.2	40.0	15.96	25.2
	Disagree	74.8	60.0	84.03	74.8
#6	Agree	59.1	56.8	65.5	26.2
	Disagree	40 9	43.2	34.5	73.8
#7	Agree	44.9	40.8	31.9	54.2
	Disagree	55.1	59.2	68.1	45.8
#9	Agree	69.3	40.0	37.0	44.9
	Disagree	30:7	60.0	63.0	55.1
#10	Agree	60.6	48.0	32.8	36.5
	Disagree	39.4	52.0	67.2	63.5
#11	Agree	67.7	86.4	84.9	72.9
	Disagree	32.3	13.6	15.1	27.1
#12	Agree	69.3	45.6	39.5	43.9
	Disagree	30.7	54.4	60.5	56.1
#14	Agree	66.9	73.6	67.2	56.1
	Disagree	33.1	26.4	32.8	43.1
#15	Agree	57.5	71.2	77.3	79.4
	Disagree	42.5	28.8	22.7	20.6
#16	Agree	44.9	66.4	65.5	71.0
	Disagree	55.1	33.6	34.5	29.0
#20	Agree	59.1	35.2	38.6	37.4
	Disagree	40.9	64.8	61.4	62.6
#24	Agree	38.6	60.8	51.3	33.6
	Disagree	61.4	39.2	48.7	66.4
	N =	127	125	119	107

4. Are there relationships between grouping attitudes and students' scores on standardized achievement tests and grades in academic subjects?

Significant correlations of the twenty-five attitude items with course grades and standardized achievement test scores are listed in Table 7. None of the attitude items directly concerned with homogeneous grouping were significantly related to grades and only four of the grouping items showed significant correlations ($p < .01$) with any of the achievement test scores. In item 9 students with higher achievement test scores indicated disagreement with grouping by physical ability in physical education classes, but in item 10 they favored scholastic grouping ability, i.e.,teachers should not give the same assignments to everyone. Similar opinions were expressed in items 20 and 23 where the students with higher achievement scores preferred to be grouped with children of similar ability and to be separated into classes where everyone learns at the same rate.

In summary there were no relationships between grouping and course grades but there were several significant correlations between grouping attitudes and achievement test scores. Students with higher achievement scores tended to favor grouping.

Table 6

Correlation of Attitude Items
With Grades and Test Scores

Attitude Items	Social Studies Grade	English Grade	Reading Grade	Math Grade	Science	STEP Math	STEP Science	STEP Social Studies	STEP Reading	Iowa Composite Grade Equiv.
1										
2	.20*						.20*			
3										
4										
5	.23*			.23*						
6			.21*							
7										
8										
9										.22*
10									.22*	.23*
11										
12										
13	.21*	.24*	.25*	.27*	.26*	.24*	.29*	.29*	.29*	.30*
14										
15										
16						.25*	.32*	.26*	.26*	.30*
17										
18								.22*	.27*	
19										
20							.23*			.37*
21										
22										
23							.25*	.22*	.21*	
24			.26*							
25										

*p .01

5. Are attitudes toward grouping, grouping placement, and perceived grouping placement related to students' satisfaction with school and with self-concept?

There were no significant intercorrelations between school satisfaction (SOP) and any of the individual attitude items. There were, however, several significant relationships with the self-concept factors. The "good student" factor was negatively related to the following anti-school attitudes: "Most students learn faster than I do (r=-.21)", "My friends are not interested in school (r=-.29)", and "School is only good for the smart students (r=-.21)." The popularity or leadership factor was negatively related to item 13, "most students in my classes learn faster than I do (r=-.32)".

The students' homogeneous grouping placement was positively related to the "Good Student" factor (r=-.21) and to the popularity factor (r=-.27) of the Self-Concept Scale, indicating those students in the upper grouping placement categories had better self-images on both dimensions. There was no significant relationship between the grouping placement and Student Opinion Poll (r=-.08), although the correlation was in the expected direction.

Perceived grouping placement was not significantly related to school satisfaction (r=-.08) or the "Good Student" factor of the Self-Concept Scale (r=-.16). However, the perceived grouping placement was significantly related to the "popularity" factor (r=-.25).

In summary, the self-concept dimensions were to some extent related to grouping attitudes, grouping placement and perceived

grouping placement, but overall school satisfaction was unrelated to these variables. Whether this can be considered an expression of independence of school satisfaction from grouping or, on the other hand, should be interpreted as a result of weak instrumentation is not determinable in this study.

SUMMARY AND CONCLUSIONS

1. Across the sample as a whole, positive attitudes toward homogeneous grouping were expressed.

2. Some attitude differences were found among students in different levels of grouping placement, with those in the highest and lowest groups being more favorable to grouping.

3. Students do perceive their grouping placement with considerable accuracy, but their perceived grouping placement was not systematically related to attitude differences.

4. There were no systematic differences between sexes in regard to attitudes toward grouping, but there were a number of differences between classes, reflecting possible attitude changes based on experience with homogeneous grouping. Those students who had experienced homogeneous grouping were more favorable to it than those who had not had this experience.

5. There were no significant relationships between course grades and attitudes toward grouping, but in several instances there were significant relationships between scores on Standardized Achievement Tests and attitudes toward grouping, with the higher achievers being more favorable toward grouping.

6. Little relationship existed between attitude items and self-concept or school satisfaction. Grouping placement was significantly related to both the "Good Student" and "Popularity" dimensions of the Self-Concept Scale but not to overall school satisfaction. Perceived grouping placement was significantly related only to the "Popularity" dimension of the Self-Concept Scale.

A number of limitations in this study must be noted. The study was done in a single school system and due to its size and rural character, it may not be particularly representative of school systems in general. No control group existed in this study, and inferences about experience with grouping had to be made on the basis of cross-section rather than longitudinal data. Finally, several of the instruments used were experimental and little external validity is available for them; even the grouping placement classification for the students was somewhat subjective.

Given that this was basically a descriptive study, and taking into consideration the limitations listed above, the results as a whole favored homogeneous grouping. Those students in the extreme groups were more favorable to grouping. Students in the upper placement groups had somewhat more positive self-concepts, supporting some of the previous research in this area. Although the relationships found were generally small, there is little in these data to suggest that students oppose homogeneous grouping or would choose to be ungrouped if that option was to be presented.

APPENDIX I

ATTITUDES TOWARD STUDENT GROUPING

1. I am usually in classes with other students who learn about as fast as I do.

2. Most of my friends get good marks in school.

3. There should be special classes for students who want more school work.

4. A student who does not want to go to college should not be placed in classes with students who do want to go to college.

5. My friends come from my neighborhood.

6. I prefer to be with the same classmates in my classes throughout the day.

7. I would like to take courses with people who have the same interests.

8. Teachers should not allow fast students to go ahead of slow students in the same class.

9. Students who are good at sports should be in the same Physical Education classes.

10. All teachers should give the same assignments to everybody.

11. I would like to be in a class where everybody learns at the same speed.

12. Students should be in class with their friends.

13. Most students in my classes learn faster than I do.

14. Most of my friends are in classes with me.

15. Students who want to go faster should be put in a special class rather than to just be given more work in their regular classes.

16. My friends are not interested in school.

17. Students who are not interested in a lot of extra homework should have their own classes.

18. School is only good for the smart students.

19. Those students who read faster should have classes together.

20. I would prefer to be in a class with my friends rather than one where everyone can do about the same level of work.

Items underlined are those most directly concerned with homogeneous ability grouping.

(cont.)

ATTITUDES TOWARD STUDENT GROUPING (cont.)

21. It isn't right to put the students who are having trouble in school all in one class.

22. I do not want my friends in the same class with me.

23. Students do not like to be separated into classes where everyone learns at the same rate.

24. I would prefer to have the same students in my classes next year that are in my classes now.

25. If there are students who want to go faster they should be allowed to go ahead of the rest in the same class.

Items underlined are those most directly concerned with homogeneous ability grouping.

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